HST Imaging of 1 Ceres

W.J. Merline, S.A. Stern (SwRI), R.P. Binzel (MIT), M.C. Festou (Obs. Midi-Pyrenees), B.C. Flynn (CEA/UCB), L.A. Lebofsky (LPL, U. Arizona)

We have obtained high resolution images of asteroid 1 Ceres using the Faint Object Camera of the Hubble Space Telescope in the /f96 mode. The images, taken over four orbits in June 1995, are in three bandpasses: near-UV (342 nm), mid-UV (276 nm), and far-UV (160 nm).

Best resolution, limited by the PSF, is obtained at 125 nm, while the best S/N is achieved at 342 nm. At 125 nm, each resolution element, slightly larger than a pixel, corresponds to a linear dimension of 53 km at the asteroid. Therefore, Ceres is about 18 resolution elements in diameter and 240 elements cover the disk.

These data are the first direct albedo maps for Ceres. Distinct surface units can be seen, some spanning hundreds of km. We will present and discuss these intriguing images.

Abstract submitted for 1996 DPS meeting

Date submitted: LPI electronic form version 5/96

Division for Planetary Sciences Abstract Form

DPS Category 10 Running #7478 Session 0.00

Invited ☐ Poster presentation ☒ Title only ☐

Have you received your Ph.D. since the last DPS meeting?

Yes ☒ No ☐

Is your abstract newsworthy, and if so, would you be willing to prepare a news release and be available for interviews with reporters?

Yes ☐ No ☐ Maybe ☐

Paper presented by W.J. Merline
Southwest Research Institute
1050 Walnut St. # 426

Boulder CO 80302 USA
Phone: 303-546-9670
Fax: 303-546-9687
Email: merline@yeti.space.swri.edu

Special instructions: Tue Aug 27 16:53:02 CDT 1996

Membership Status (First Author):

DPS-AAS Member ☒ Non-Member ☐

Student Member ☐ Student Non-Member ☐

Is this your first DPS presentation? Yes ☐ No ☐

Sponsor: